Fourth Five Year Plan—Establishment of Polytechnic for offering Diploma Course in Horological Engineering at Bangalore—scheme for the—approved.

READ :—

(i) Government Order No. ED 56 TEC 72, dated 18th September 1972.

(ii) Letter No. DVP 17 PTS 72, 14431, dated 29th/31st January 1973 from the Director of Technical Education, Bangalore.

PREAMBLE :—

In the Government Order, dated 18th September 1972 read at (i) above, approval was accorded to the proposal of the Director of Technical Education to permit Messrs. Shreeshyla Trust, Industrial Estate, Karakapura Road, Bangalore-11 to start a Polytechnic offering Diploma Course in Horological Engineering at Bangalore and to recognise the same for a period of three years from the year 1972-73 for offering a three years' Diploma course in Horological Engineering subject to certain conditions.

(2) In his letter dated 29th/31st January 1973 read at (ii) above, the Director of Technical Education has stated that the scheme for starting of the Polytechnic offering Diploma Course in Horological Engineering is proposed to be brought under the scheme of Diversification of courses under the Fourth and subsequent Five Year Plans. He has also sent a detailed scheme for the establishment of the said Polytechnic and requested approval of State Government (i) to the scheme pending its assessment and approval by the Southern Regional Committee, Madras and also (ii) to bring the said Polytechnic under the Grant-in-aid Code of the Department of Technical Education from the year 1973-74 subject to the terms and conditions as applicable to the grant-in-aid Institutions. It is proposed to release grants in-aid to the institute towards its recurring charges only during 1973-74. Grant-in-aid towards non-recurring charges of the institute will be considered during the V Plan period.

ORDER No. ED 8 MPI 73, BANGALORE, DATED 16TH JANUARY 1974.

Pending assessment of the Scheme by the Southern Regional Committee and its approval by the All India Council for Technical Education and the Government of India, sanction is accorded to the Scheme for the establishment of a Polytechnic for offering Diploma Course in Horological Engineering by Messrs. Shreeshyla Trust, Bangalore-11, as detailed in the Appendix to this Order at a total estimated cost of Rs. 13,00,860 non-recurring and 1,23,000 recurring per annum.

2. Sanction is also accorded to bring the said Polytechnic under the Grant-in-aid Code of the Department of Technical Education from the year 1973-74 subject to the terms and conditions as applicable to the grant-in-aid Institutions.

3. The expenditure on this account may be met from the provision made in the Plan budget for 1973-74 under the head "28 Education-XX. Development Schemes-(i) State Plan-D. Technical Education-13. Diversification of Courses in Polytechnics in the IV Plan including expansion in the intake in the existing courses if any-A. New Schemes—(vi) Grantin-aid to Polytechnic offering Horological Engineering at Bangalore.

4. This order issues with the concurrence of the Finance Department—vide their Un—official Note No. FD 691/INT/W1/73, dated 11th December 1973.

By Order and in the name of the Governor of Karnataka,

G. NANJAPPA,

Under Secretary to Government,
Education and Youth Services Department.

APPENDIX

SCHEME FOR THE ESTABLISHMENT OF A POLYTECHNIC FOR OFFERING DIPLOMA COURSE IN HOROLOGICAL ENGINEERING BY MESSRS SHREESHYLA TRUST, BANGALORE

I. **Aims and Scope:**-The Diploma course in Horological Engineering is not offered in any of the Institutions in the State and in the country also. The Horological Engineering is an expanding field with the increase in the number of watches used in the country and the increasing production of watches.

Bangalore, with the Hindustan Machine Tools Limited and Messrs Hegde and Golay Private Limited, manufacturing watches can further develop watch industries and can be the centre in the manufacture of watches for the whole country.

The Shreeshyla Trust, Bangalore, which has been registered, has come forward to start the Polytechnic to offer Diploma course in Horological Engineering to train the Technicians and Supervisors for the Industry. The Polytechnic is proposed to be started as an aided institution under the fourth plan.

II. **Employment Opportunities** -The Scope for employment in this field is expected to be good with the Hindustan Machine Tools Limited expanding its capacity to a million watches and Messers Hegde and Golay Private Limited, producing one lakh watches Further, it is estimated that there will be about 40 million watches in India requiring servicing and repairs. At present, the demand for watches in India is estimated to be one million a year and it is increasing every year. The Industries may also be expanded to export watches and components to other countries. Switzerland is stated to have 5 (five) million labourers with a million imported labour. By developing the skill in Horological Engineering in the Country, the labour can be supplied to Switzerland on the basis of Indian labour in Indian Soil.

III. **Management and Financial Support**:-The Polytechnic will be managed by the Shreeshyla Trust which consists of three Indian Nationals and 2 Swiss Nationals. The trust has been registered. It has to be expanded to consist of eight members including three nominees of State Government.

For the Management of the Polytechnic, a Governing Council has to be constituted by the Trust with not more than fiften members including three from the Department of Technical Education.

Messrs Hedge and Golay Private Limited, which is an Indo Swiss Joint Enterprise and 20 Industrial Units of the Shreeshyla Co-operative Industrial Estate who have started manufacturing watch components and assembly in small scale sector have come forward to give financial assistance and to depute their senior engineers and part-time lecturers to teach in the polytechnic and also to give facilities needed for practical training in their factory.

Messrs Shreeshyla Co-operative Industrial Estate is stated to have assured the Trust for providing one and half acres of land for locating the Polytechnic.

IV. **Recognition**:—The State Government in their Order No. ED. 56 EC 72 dated 18th September 1972 have accorded approval to start the Polytechnic and to recognise the Diploma course in Horological Engineering for a period of 3 years from 1972-73.

V. **Location of the Polytechnic**:—The Polytechnic is proposed to be located in the Shreeshyla Co-operative Industrial Estate, Kanakapura Road, Bangalore-11.

VI. **Intake**:—The Intake is proposed to be 20 candidates each year subject to a variation of 10 percent if found necessary with the approval of the Director of Technical Education.

The detailed list of equipment required for the Institue is enclosed as Annexure-I

3. *Staff* :—The Staff required for the Polytechnic, is as follows:

Sl. No.	Designation	Number of posts.	Scale of pay.	Average (per month)
1.	Principal ...	1	400-950	675
2.	Head of Department ...	1	350-900	625
3.	Lecturers ...	4	275-550	1652
4.	Part-time Lecturers ...	12	Rs. 100-pm.	1200
	Administrative Staff.—			
1.	Office Superintendent ...	1	200-450	325
2.	First Division Clerk ...	1	130-290	210
3.	Second Division Clerk ...	2	90-200	290
4.	Typists ...	1	90-200 Rs. 20 (Spl. pay)	145
5.	Attenders ...	1	80-145	115
6.	Peons. ...	2	65-95	160
	Workshop Staff.			
1.	Foreman ...	1	225-450	338
2.	Instructors ...	1	175-450	313
3.	Assistant Instructor ...	1	120-240	180
4.	Mechanics ...	2	90-200	290
5.	Helpers ...	4	80-145	460
	...			
	Rs. 6,998 x 12=Rs.	83,976-00 per annum.		6,998

Maintenance :—

A sum of Rs. 39.400 per annum will be required for Maintenance charges including the costs of raw materials, power charges, etc.,

XIV *Financial Implications.*—

The following will be the financial implications :

Non Recurring.—

1. Buildings	Rs.	6 85,860
2. Equipment	Rs,	6,15,000
Total	Rs.	13,00,860

Recurring (per annum)

1. Staff Salaries	Rs.	83,976
2. Maintenance including electricity charges and raw materials	Rs.	39,400
	Rs.	1,23,376
	Say Rs.	1,23,000

XV. Staff Selection Committee.—The selection of staff for appointment, has to be made by a Staff Selection Committee constituted by the Governing Council with one Representative, each of the Governing Council, Board of Technical Examinations and Director of Technical Education and two experts to be nominated by the Governing Council in consultation with the Director of Technical Education. The Chairman of the Governing Council will be the Chairman of the Staff Selection Committee.

XVI. Pattern of Sharing the Expenditure.—The pattern of assistance for the Recurring charges will be in accordance with the provisions of the Grant-in-aid code applicable to Polytechnics. The State share of Recurring Expenditure will be met out of the State plan scheme upto the end of the five bourth Year Plan.

Regarding Non-Recurring expenditure, the same will be met out of the provision in the Fifth Plan in accordance with the pattern to be prescribed for the fifth plan.

XVII. Plan Provision.—A provision of Rs. 0.05 lakh has been made under plan for giving assistance to the institution during the year 1973-74.

G. NANJAPPA

Under Secretary to Government,
Education and Youth Services Department.

ANNEXURE-I

List of Equipment required for the Establishment of a Polytechnic offerin Diploma course in Horological Engineering at Bangalore, by M/s. Shreeshail Trust, Bangalore.

1. Horological Engineerring

Workshop Tools:

1 Electric polishing machine 5362	...	...	1,740-00
10 bench lamps 4003 PW 8	...	...	1,035-00
1 electric cleaning machine RG 7	...	...	713-00
6 staring tools 1808/92 A	...	...	845-00
6 Jewelling tools Seitz 30300	...	...	1,056-00
1 waterproof testing apparatus Bergeon 2684	...	...	275-00
1 stake for fitting unbreakable glasses No. 6020A		...	147-00
2 hairspring counting machines "Luthy" 1263 L 18000/ 21600	...	...	478-00
1 set adjustable screw-die and tape 30010	...	...	118-00
1 set ,, 30418	...	...	186-00
6 electric heaters 30460	...	...	104-00
3 Micrometers 1050/1423 "Vidia ended" V-shape.	...	...	460-00
3 Bergeon Micrometers 30116/4	...	...	360-00
1 Reglomet "automatic testing machine" No.- 4 24613/24	...	...	570-00
6 Tools for straightening pivets "Seitz" 30350	...	...	157-50
2 tubes of waterproofing solution "Labor" 4834	...	...	28-00
6 spirit lamps 2609	...	...	25-00
6 dial rubbers 2132	...	...	4-05
6 escapament tools 2229	...	...	440-00
4 Arkansas and India hand stones No. 4125	...	...	116-00
1 Bergeon Vigor tool 4266	...	...	62-00
1 Bergeon Vigor tool 4940	...	...	62-00
1 case-opener 2835	...	...	306-00
2 sets of winders 30081	...	...	122-00
2 sets of winders for Nivaflex mainsprings No, 2795	...	...	142-00
1 hand-saw 1736	...	...	5-75
6 gross hand-saw bladesNo. 2/0-1-3 Hercules 5104	...	...	39-00
44 dz drills Erauf flat 20-25-30-35-40-45-50-55-60-65-70-75-80-85-90-95-100-110-120-130-140-150	...	...	110-00
10 metres transmission belt (Plastic) No. 1680 RD 4 mm	...	...	2-85
1 burnisher Vidia 2333 g	...	...	31-50
1 drilling machine with motor 4863	...	...	48-00
2 boxes Rureka No. 2413	...	...	54-60
18 square flat files 6" No. 1	...	...	70-00
18 pillar files 6" No, 5	...	...	88-10
18 barrettes files 36" No, 4	...	...	54-00
18 square flat files 6" No. 3	...	...	77-40
18 square files 4" No. 4	...	...	48-60
18 sets of 12 files 30421	...	...	345-00
5 dz. gravers Lecoultre No. 1.	...	...	61-75
5 dz. ,, ,, 3	...	...	61-75
5 dz, ,, ,, 5	...	...	61-75
6 gravers (square) No. 15	...	...	10-65
2 sets of assorted solder 30050	...	...	40-00
4 boxes of diamant powder H2	...	...	11-00
6 boxes of polishing "Rouge" in plate 530215	...	...	25-20
6 tubes of screw-drivers spare bits 50/100	...	...	8-40
30 tubes of assorted screw-drivers spare blades	...	...	42-00
20 dz. emeri sticks (flat) 4/0-2/0-1/0 1 2 4 dz each	...	...	122-00
24 dz peg. wood 0 mm-3 mm	...	...	156-00
2 boxes Rodico 6033	...	...	15-00
6 dz pith wood Ist quality No. 1586/1	...	...	72-00
15 green plastic "A'f 4861	...	...	37-20

1 set of assorted high speed steel gravers 4402	...	...	75-50
2 calipers 2757/AJG	..	...	167-20
3 jewel gauges 30529 A "Seitz"	...	...	189-00
1 steel try-square 1606/75A	...	...	25-00
3 steel try-squares 1605/1001	...	...	91-50
1 double meter 2502	...	..	2-65
1 Horia apparatus 2141/1	...	...	72-00
1 dz saw blades No, 24 1730	...	...	6-60
1 hand-saw No. 1739	...	...	4-60
2 sets of drills 1802 B/AR	...	...	98-00
1 set of drills 1802/E/AR	...	...	122-00
4 centring drills No. 1-4 No. 2.5 - 8 1787 AR	...	...	9-30
10 meters roll of nylon for hand-bow	...	...	7-50
3 rolls of steel wire 0.2—0.4—0.6	...	...	28-00
500 gr. nickel wire 1.00	...	...	7-60
1 set of screw drivers 2546	...	...	15-00
18 round files 4' No. 4	...	...	48-00
1 set of numbering punches 4649/2 mm	...	...	12-00
1 set of letters 4650/2 mm	...	...	28-00
6 dz emery-cloth (very fine-fine-medium) 2 dz. each No. 1550	...	...	67-50
60 Polysterol cases of 6 compartments each 2968/6 each 2963/6	...	...	189-00
1 electric grinding machine TS 55 2800 "REMS"	...	...	370-00
400 round cases with glass top 40 mm 2963/40 × 16	...	...	67-20
6 movable microscopes ARY 1492/8	...	...	79-20
3 tools for removing cannon pinions 2030/113 a	...	...	42-60
1 presto tool for removing C/S wheel 4079/34	...	...	21-00
2 sets of assorted Broaches 30020	...	...	70-00
1 pair of pliers 30223	...	..	16-20
1 hand cutter 4624/18	...	...	16-85
1 pair of pliers super 4190/19 2565 M	...	...	13-70
2 oil cane 2428	...	...	3-00
1 set of luminous powder 30049/5	...	...	17-10
3 tubes of Luminous powder 4078/5	...	...	19-20
2 rolls of iron wire 2194626616	...	...	5-20
2 counter sinks cutters 1898	...	...	45-20
2 dozen cutting broaches 3008	...	...	91-20
1 Vice large size 2857/60	...	...	52-00
40 Selvyts cloths B	...	...	128-00
1 verticle micro meter 30160	...	...	188-00
2 seitz loupes 20 ×	...	...	46-00
2 seitz Loups 10 ×	...	...	46-00
6 tools for filing Balance Screws 1999	...	...	228-00
1 tool for pinning the stud 1873	...	...	14-00
1 Pump Bergeon EMO No. 5011	...	...	14-00
1 set of jewels seitz No. 303104 B/1	...	...	332-00
8 Small baskets for cleaning machine RG 7 4108	...	...	20-00
2 ,, % % RG 7 4109	...	...	5-00
1 spare jar for cleaning machine RG 7 1847	...	...	6-80
2 rubber gaskets for cleaning machine RG 7	...	...	0-90
3 bottles of vissiin 4503/50	...	...	5-50
3 porcelene capsules 4668	...	...	7-20
3 trivets 4669	...	...	12-00
3 coils of soldering mat' No. 2 30050 e	...	...	3-00
1 porcelene capsule 1506/80	...	...	2-70
1 solution borax 1581	...	...	4-20
1 Tool presto 30636/1	..	...	20-00
1 Tool presto 30637/2	...	...	20-00
2 Stakes Platax 3677	...	...	94-00
1 dz spare points for Arkograph 2403	...	...	16-50
1 electric engraver Arkograph 2403	...	...	123-00
10 Pines special soap 5098	...	...	15-00
2 pairs of pliers 2509 a/1	...	...	27-00
1 Vibrograph B 200	...	...	1,575-00
1 Chronographic Super	...	...	1,325-00
1 Microscope Wild M 5 with accessories	...	...	3,150-00

1	Lathe Schaudblin 70 mm	...	4,300-00
2	Lathes Favorite	...	2,200-00
8	Pivoting lathes Steiner	...	1,600-00
1	apparatus for pivoting M. T. B. 6118	...	450-00
1	hand wheel (Steiner)	...	70-00
8	small lathes with sliding device	...	1,200-00
4	assortment of 18 chucks 2 mm No. 25 + 16 chucks No. 37 + accessories	...	480-00
8	motors rheostat 4 E 60 Universal (Bergeon)	...	2,000-00
1	Magnomatic	...	90-00
1	Watch cleaning machine Vibrosonic 612 with generator MR 75	...	1.800-00
1	Compos Finilux/SP (for polishing) (Raymond, Bienne)	...	8-00
100	Litres F 45 (Imbach)	...	260-00
50	litres Rubisol (Imbach)	...	130,00
I	set of special watch oils Moobius	...	20-00
1	Soldering Iron	...	30-00
	Individual Tools.		
1	Vice No. 1021	...	48-20
2	Leather Sticks 12 mm 1282 A	...	1-20
2.	Leather stick protections 4056	...	1-00
1	Steel ruler 20 cm 3045I Incz	...	2-60
1	tool with assorted hole size 30109 1	...	4-00
1	setlofcutting broaches 30046	...	19-50
1	set of smoothing broaches 30075	...	15-20
3	balance screw holders 30-40-50-100	...	10-80
1	lever holder 30433	...	3-70
1	brass vice 1842-8 cm)	...	1-30
1	brass vice 1842-17 10 cm.	...	1-30
1	steel hammer with handle 70 cm 1438/	...	3-00
1	set of screw-drivers with stand 2738 A	...	37-50
1	metal bow 30 cm 2045	...	3-00
1	tool to open bridles 30090	...	22-50
1	truing-wheel tool 30548	...	29-00
1	poising tool 30200/3	...	48-00
1	round brass stake with triangular opening 30106	...	3-90
1	saphire file 30401/6	...	10-40
1	set of oil pots 30549	...	20-00
1	Oil container (glass) 2813	...	1-10
1	set of assorted oilders 30102 A-D	...	2-50
1	case opener 4932	...	3-65
1	movement holder (Slick small) 4039	...	4-20
1	buffloide microscope 2611 2	...	2-50
1	movement holder (Slick iarge) 4040	...	4-60
1	loupe 2649 12×	...	6-25
I	loupe 1462 10×	...	3-50
1	pen-knife 1036	...	3-00
1	pen-knife 1036	...	3-00
1	soft bursh 1104/4	...	2-50
1	harder brush 1104/2	...	2-50
1	Arkansas Square Stone 12 cm 1952 e	...	3-00
1	saw-dust box 1324	...	3-00
1	benzine jug (glass) 80 mm 30514/80	...	5-20
1	plastic pump 30540	...	2-45
1	bench green plastic 4861	...	2-50
1	feather brush 1301/4/D	...	1-25
1	feather brush 1303/2	...	2-00
1	compass with wooden box 30103	...	3-40
1	Rubia stainless steel twcezer Sb. inox	...	3-50
1	Dumont stainless steel tweezer No. 3 inox	...	6-00
1	Dumont stainless steel tweezer 4773/5	...	8-00
1	Bubis nickel tweerzers 2906/11	...	5-00
1	Dumont stainless steel tweezer No. 4	...	7-00
1	brass brush 2834/L	...	2-60
1	brass truing-wheel tool "Escape"	...	6-20
4	barrle arbor holders 30610 0.90-1.75-2.30	...	22-40
1	Regulating glass stake 30105 3 5 mm	...	4-50
1	Roller remover 2810	...	2-90

1 Hairspring cutter Rubis No. 17	...	...	16-00
1 Plastic tray and plastic bell 30097 BC	...	...	3-25
1 Hand Vice 2867/110 A	...	...	9-00
1 India square stone 150/10 1945/36	...	...	4-25
1 pair of pliers for hands 2011	...	...	13-20
1 pair of brass pliers 2507	...	...	13-30
11 pair of steel pliers 2017	...	...	13-30
1 bench lamp 4003 PW B	...	...	103-50
1 pair of pliers for holding studs 1337/12	...	...	10-50
1 pair of pliers with long flat ends 1350/11	...	...	5-50
1 nickel plate for finisher 1070/11a	...	...	2-50
2 sets of small assorted cutters 3008	...	...	7-60
1 stake for hands 1614	...	...	12-00
1 tool for fitting chronograph hands 2284 M	...	...	2-50
2 sets of small assorted cutters 3008	...	...	7-60
1 stake for hands 1614	...	...	12-00
1 tool for fitting chronograph hands 2284 M	...	...	5-50
1 Polishing screw holders 2003	...	...	5-50
1 set broaches 30017 TP/M 30013/14/11	...	...	21-50
1 small burnisher for pivot end- 1892	...	...	2-00
2 burnishors, pivots 1891 G. 1890 G	...	...	16-00
Assorted Supplies			
1 assorted brass 2188	...	...	238-00
2 assorted nickel 2189	...	...	110-00
4 assorted raw steel 2187	...	...	98-00
Brass in Feet No 2172			
100 gr. 0-50		...	5-50
100 gr. 0-80	...	...	3-85
200 gr. 1-00	...	...	7-70
300 gr. 1-50	...	...	9-00
400 gr. 2-00	...	...	12-00
500 gr. 3-00	...	...	7-40
700 gr. 4-00	...	...	9-80
1000 gr. 5-00	...	...	13-85
			69-10
Silver Steel in Feet No. 2184			
50 gr. 0-30	...	...	2-25
100 gr. 0-50	...	...	4-00
100 gr. 0-80	...	...	3-30
200 gr. 1-00	...	...	4-50
200 gr. 1-20	...	...	4-50
200 gr. 1-40	...	...	4-30
300 gr. 1-60	...	...	6-00
300 gr. 1-80	...	...	5-55
400 gr. 2-00	...	...	6-40
400 gr. 2-50	...	...	5-20
500 gr. 3-00	...	...	4-70
500 gr. 3-50	...	...	4-70
600 gr. 4-00	...	...	5-35
600 gr. 4-70	...	...	4-85
1000 gr. 5-00	...	...	7-90
3 packets of dial washers No. 10045	...	...	3-90
2 packets of dial washers No. 10046	...	...	3-30
10 packets of assorted raw balance staffs No. 10037	...	...	25 00
5 packets of regulator pins No. 100000	...	...	17-00
6 packets of nickel studs No. 10002	...	...	4-20
4 packets of nickel studs No. 10003	...	...	2-80
2 packets of suspension No. 10059	...	...	12-40
100 assorted unbreakable glasses 160-240 No. 1230 N	...	...	35-00
150 assorted unbreakable glasses 160-240 No. 1230 H	...	...	35-00
150 assorted unbreakable glasses 240 320 No. 1233 N	...	...	60-00
200 assorted unbreakable glasses 240-320 No. 1233 H	...	...	90-00
3 doz. squares file handles No. 1439/1-8	...	...	8-40
3 doz. square file handles No. 1439/1-14	...	...	15-50
200 gr. shellac No. 1568	...	...	3-68

6 tempering tools	...	...	25-20
3 brass blowers 27 cm 1746	...	...	4-80
1 ass. blue steel 30036	...	...	12-00
2 ass. timing washers 30131-30132	...	...	8-60
3 doz. wooden handle (peer shape) 1439-4	...	...	13-20
		Total	75,000.00

2. Machine shop and precision Instruments

Sl. No.	Name of the Machine and Marks name	Number of Machine	Price quoted including Packing and Freight.	
1.	Signal Generator upto 100 Mc/S., General Radio CmbH, West Germany (Motwana) ...	One	25,000-00	
2.	Oscilloscope, d.c. to 50 Mc/s., Double beam, Taktronix Inc., U.S.A., ...	One	45,000-00	
3.	Pulse Generator upto 10 Mc/s., Mewlett-Packard Vertiriebs GmbH 6, West Germany (Blue Star) ...	One	6,100-00	
4.	Measuring Bridge, Marconi Heptechnic GmbH West Germany. ...	One	7,884-00	
5.	Electronic Counter, Type: 5326A, Hemlett-Packard Vertiriebs Gmbh 6, West Germany (Blue Star) ...	One	500-00	
6.	Stabilised Power Supply (0.50V, 0-3A), Unileb Electronics, West Germany, (Lambda Electronics) ..	One	10,500-00	
7.	Temporature Test Chamber (-50 to +100) Tenney Engg. Inc., U.S.A., ...	One	34,000-00	
8.	Frequency Standard (105A. Quarts Oscillator) Hamlett-Packard Vertiriebs Gmbh, 6. West Germany, (Blue Star) ...	One	12,000-00	
9.	Automatic Drafting Machine, Appolo Electronics, England. ...	One	13,320-00	
10.	Vert Ohm Meter (Motwane). Philips India Ltd., Madras	One	995-00	
11.	Automates ...	One	1,00,000-00	
				2,55,299-00
12.	Gear Hobbing Machine ...	One		75,000-00
13.	Copy Drilling Machine ...	One		75,000-00
14.	Profile Projector Comparascope ...	One		60,000-00
		Total		4,65,299-00

3. Costing Equipments and Science Laboratory.

(a) *Testing Laboratory*:—

		Quantity		
1.	Young Modulus Apparatus ...	1	1,000	
2.	Hardness Test in Machine ...	1	5,000	
3.	Instrument such as stop watches, dial guages, Micrometers, scales, metre rods, vernier calipers, etc....	1	3,000	
4.	Spring Balance upto 15 kgs. ...	2	200	
5.	Physical Balance upto 1 kg. ...	1	250	
6.	Patigue Testing Machine. ...	1	6,000	
7.	Other Miscellaneous Accessorics ...	1	500	
				15,950

(b) *Physics*:—

1.	Nicholsons Hydrometer ...	1	10	
2.	Specific Gravity Bottle ...	1	9	
3.	Boyles Law Apparatus ...	1	32	
4.	Hydorstatic Bench ...	1	1	
5.	Balances ...	3	300	
6.	Metal Cylinders ...	2	2	
7.	Wight Boxes 1 kgs. to gms ...	4	80	
8.	Tall Glass Jars. ...	3	75	
9.	Spare Tubes open as well as closed type for Boyles law apparatus ...	2	2	
10.	Calorimeters ...	2	10	
11.	Electric Heaters ...	1	30	

VII Duration of the course:—The duration of the course will be 3 years.

VIII. Minimum qalification for admission:—will be pass in the S.S.L.C. (X Standard) Or any other examination recognised as equivalent thereto.

IX Selection of candidates for Admission :—The Selection of candidates has to be done by a Committee constituted by the Governing Council on the basis of the S.S.L.C. Marks, performance in the entrance test, aptitude test and interview by the committee. The Necessary reservation will have to be made for Scheduled Castes and Scheduled Tribes students.

X. Syllabus and Scheme of Examination :—The Syllabus and scheme of examination, will be as prescribed by the Board of Technical Examinations. The Board of Technical Examination wi l conduct the Examination and award the Diploma.

XI. Fees :—The following will be the rates of fees prescribed.

For the course per annum.

(a) Registration fee	...	Rs. 1-00	(to be paid with the Application)
(b) Admission fee	...	Rs. 5-00	(to be paid at the time of admission)
(c) Tuition fee	...	Rs. 90-00	(Payable in four instalments in the months of July, September, November and January)
(d) Reading Room and Association:		Rs. 6-00)	(Payable in two instalments in the months of July and November)
(e) Sports Fee	...	Rs. 6-00)	

The Institute will be permitted to charge double the rate of tuition fee mentioned above as permissible under the Grant-in-aid code of the Department of Technical Education.

The procedure for collection of fees and fines will be as prescribed in Government Order No. E D 64 TEC 66 dated 17th December 1966.

XII Concessions :—The students of this course are eligible for Scholarships, Freeships and other Educational concessions as are admissable to the students of other courses in the Polytechnics.

XIII. Facilities required :—The following will be the facilities to be provided for the Polytechnic as per the scheme furnished by the Management.

1 Building.—

(i) Administrative	...	1700 Sft.
(ii) Class rooms including Library and Drawing Hall.	...	6200 Sft.
Workshop	...	8200 Sft.
	...	16100 Sft.
Add 12% for walls, Corridors etc.,		6762 Sft.
Total Plinth Area.	...	22862 Sft.
(@) Rs 30 per Sft.	Rs.	6,85,860

2. *Equipment.*

The estimate of amount required for the equipment is as follows.

1. Horological	Rs.	75,000
2. Machineshop and Precision Instruments	Rs.	4,65,299
3. Testing equipments and Science Laboratory	Rs.	24,126
4. Library and Furniture.		50,000
Total.		6,14,425
Say Rs.		6,15,000

12.	Therometers 0-50 C × 1/5 C	...	2	40		
13.	Steam Heaters.	...	1	25		
14.	Thermometers 0-110 C × 1/2 C	...	2	20		
15.	Wire Guages.	...	3	12		
16.	Drawing Boards .	...	2	20		
17.	Plane Mirror Strips	...	2	2		
18.	Drawing Pins	...	1 doz.	2 doz.		
19.	Glass slab	...	1	10		
20.	Prism.	...	1	10		
21.	Travelling Microscope	...	1	400		
22.	Air Cell apparatus	...	1	10		
23.	Rectangular trough	...	1	5		
24.	Convex lenses	...	1	2		
25.	Concave lens	...	1	2		
26.	Concave Mirror	...	1	8/50		
27.	Convex Mirror	...	1	8/50		
28.	Protractors.	...	2	5	1,133	
					17,083	

(c) *Sound*:—

1.	Set of tuning forks	...	1 set	30-00	30-00	
2.	Steel wire	...	2 0z	16-00(lb)	2-00	
3.	Brass wire	...	1/4lb.	3-00(lb)	2-00	
4.	Resonatiogair Colum apparatus	...	1	60-00	60-00	
5.	Iron wire	—	1/4lb.	4-00(lb)	1-00	
6.	Hammers	...	2	1-00	2-00	
					97-00	97-00

(d) *Demonstration Apparatus*:

1.	Pinhole Camera	...	1	20-00	20-00	
2.	Models of lenses	...	1 set	30-00	30-00	
3.	Concave Mirror, Big Size.	...	1	40-00	40-00	
4.	Convex Mirror, Big size	...	1	40-00	40-00	
5.	Telescope	...	1	500-00	500-00	
6.	Binocularas	...	1	500-00	500-00	
7.	Plane Mirror, big size Mounted	...	1	20-00	20-00	
8.	Prism 3" × 3" size	...	1	25-00	25-00	
9.	Spectrometer	...	1	500-00	500-00	
10.	Mercury Bulbs	...	2	100-00	200-00	
11.	Wave Motion Apparatus.	...	1	50-00	50-00	
12.	Rubber Chord	...	12			
13.	Pair of tunning forks to demonstrate boats	...	1 pair	200-00	200-00	
14.	Resonance Tope	...	1	30-00	30-00	
15.	Stethoscope	...	1	30-00	30-00	
16.	Newton's colour dise	...	1	50-00	50-00	
17.	Magnifying glass.	...	1	5-00	5-00	
18.	Latent heat of steam appartus	...		20-00	20-00	
19.	Steam Traps.	...	2	3-00	6-00	
20.	Untical benches, wooden	...	2	80-00	160-00	
21.	Lamp Houses	...	2	40-00	80-00	
22.	Beam Compass	...	1	10-00	10-00	
23.	Sonometer	...	1	50-00	50-00	
24.	Weights. 1/2 kg. set with hangers.	...	1 set	15-00	15-00	
					2581-00	2581-00

(e) *General Requirement* :

1.	Fortin's Barometer	...	1	600-00	600-00	
2.	Beakers	...	1 doz	54-00 soz	54-00	
3.	Bark corks	....	2 doz	2-00	4-00	
4.	Lead Shot	...	4 lb	4-00 lb	16-00	
5.	Glass Beads	...	2 lb	10-00	20-00	
6.	Retort Stands.	...	18	5-00	90-00	
7.	Pellats of various metals	...	11 lb each	5-00 lb	20-00	
8.	Quili tubing	...	2 lb	10-00lb	20-00	
9.	Mercury	—	3 lb	60-00	8-00	
10.	Metre scales	...	18	3-00	54-00	
						926
						20,687
11.	1/2 Metre Scales	...	4	1-50	6-00	
12.	Lycopodium Powder	..	1/2 lb	70-00lb	35-00	
13.	Pinch Clips	...	1 doz	400-00 doz	10-00	
14.	Tool Box	...	1 set	600-00	600.00	
15.	Science Charts	...	1 set	300-00	300 00	
16.	Retorterings	...	4	1-25	5-00	
17.	Rubber stoppers	...	2 doz	3-50 doz	7-00	
18.	Diamond cutter	...	1	24-00	24-00	
19.	Pressure tubing	...	10 yd	400-00yd	40-00	
20.	I. R. tubing	...	10 yd	1-00 yd	10-00	
21.	Cork Borer	...	1 set	8-00	8-00	
22.	Eipdiascope	...	1.	2400-00	2400-00	
				Total	3439-00	
						3,439
					Total Rs.	4,126

ABSTRACT

1.	Horological	...	Rs. 75,000
2.	Machineshop and Prescision Instruments.	...	Rs. 4,65,299
3.	Testing Equipments and Science Lab.	...	Rs. 24,126
4.	Library and Furniture	...	Rs. 50,000
	Total	...	Rs. 6,14,425
	Say Rs.	...	Rs. 6,15,000

G. NANJAPPA,

Under Secretary to Government,
Education and Youth Services Department.

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